

Supplementary Data 2

Multivariate analysis of 1.5 million people identifies genetic associations with traits related to self-regulation and addiction

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Supplementary Data 2 | Heterogeneity plot for the 579 EXT SNPs. Scatterplot of the SNP's GWAS effects (i.e., the regression coefficient from a generalized linear regression) on the seven Genomic SEM phenotypes against their respective factor loadings on the externalizing factor (*EXT*). Both the GWAS effects and the factor loadings are "standardized" with respect to the total phenotypic variance of the respective seven indicator phenotypes (i.e., only standardized with respect to the outcomes). Error bars represent 95% confidence intervals centered on the GWAS effect size, computed as $\pm 1.96 \times SE$. The exact number of independent samples used to derive the GWAS effect sizes are: ADHD ($N = 53,293$), ALCP ($N = 164,864$), CANN ($N = 186,875$), FSEX ($N = 357,187$), NSEX ($N = 336,121$), RISK ($N = 426,379$), and SMOK ($N = 1,251,809$). The solid black line shows the fitted regression line from an inverse-variance weighted least squares regression of the GWAS effects on the factor loadings, with the model intercept fixed to zero.



































































































































































































